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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,842	12/01/2003	Richard V. Snyder	RSM-100US	2173
23122	7590	09/13/2004	EXAMINER	
RATNERPRESTIA			LEE, BENNY T	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	
			2817	

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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- ☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), _____ day(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-21 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1, 3, 7, 9-14; 15, 18-21 are rejected.
5. ☒ Claims 2, 4-6; 16, 17 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____, filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other _____

The disclosure is objected to because of the following informalities: Page 4, line 22, note that – 40 – should follow circuit for clarity of description. Page 9, line note that “5A-5C” should be rewritten as – 5A, 5B, 5C, -- for consistency with the drawing figures lines 14, 15, similarly “52a-52f” and “62-62c” should respectively be rewritten as – 52a, 52b, 52c, 52d, 52e, 52f – and –62a, 62b, 62c ---. Pages 11-17, at each occurrence note that “coax” should be rewritten as – coaxial ---. Page 11, line 22, note that “70a-70g” should be rewritten as –70, 70b, 70c, 70d, 70e, 70f, 70g--for consistency with the drawing figures. Page 13, line 18 and page 14, line 13, note that “7a, and 7b” should be rewritten as – 7A-- and ---7B – for consistency with the drawing figures. Page 14, line 19, note that the inclusive set of drawing figures should be individually identified..

Appropriate correction is required.

The drawings are objected to because of the following in figs. 1, 3, 5, 6^B, 7^A, 8, 9, 10^A, note that the dielectric material in cross-section needs to be properly cross-hatched; In Fig. 6a, note that “6a” should properly be – 6A--; In figs. 7, 10A, note that reference label – 50 – needs to be provided; In Fig. 8, reference labels (58b, 94) need to be provided. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following claims have been found objectionable for reasons set forth below:

In claims 4, 5, 8, note that "coax" should be rewritten as – coaxial – at each instance.

In claims 9, 10, 11, 19, 20, 21, note that "respective" should precede "resonating waveguide" and "dielectric" at each appropriate occurrence.

In claims 9, 19, 20, note that – corresponding – should precede "waveguide" and "resonating" (cl. 20), respectively.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 7, 9, 10, 11, 12, 13, 15, 18, 19, 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loi et al in view of Brumbelow.

Loi et al (Figs. 3, 5) disclose two resonant cavities (12, 14) having a respective septum or iris (18, 20) disposed therewith. An adjustable coupling mechanism (10)

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comprises a filament (34) with a surrounding dielectric support (32) including probes (36, 34) disposed in resonant cavities (12, 14), respectively to provide electromagnetic coupling therebetween. A pair of screws (28, 29) engage with the coupling mechanism such that it is fixedly movable along the apertures or ~~i~~risers (18, 20) to place the coupling mechanism at different location and once placed at a location secured through set screws as depicted in figs. 3, 5. Moreover, as described at col. 4, ls 18-20, the double screw arrangement can be implemented with a single screw arrangement. However, Loi et al does not explicitly disclose that the coupling mechanism has a transverse opening which receives an adjustable coupling element.

Brumbelow (Fig. 1) disclose a probe or rod (20) providing capacitive coupling to resonating rods or posts (7, 11) in cavity resonators (1, 2) separated by wall (3) and iris (4). A single screw (2) passes through a transverse opening within the probe or rod (20) and attaches to wall (3) such that adjustment of the screw changes the location (i.e. vertically) of the probe or rod (20) and thus the coupling between the cavity resonators.

Accordingly it would have been obvious in view of the references, taken as a whole, to have substituted a single screw arrangement as taught by Brunbelow (i.e.. screw passing through a transverse opening in the probe or rod to provide adjustment thereof). Such a modification would obviously have been compatible with the suggestion found in Loi et al that a single screw configuration would have been an alternative to the two screw arrangement disclosed in Loi et al, and as such would have suggested such a modification. Furthermore, it would have been obvious in view of the

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references, taken as a whole, to have realized the resonators of Loi et al as a rod or post resonator. Such a modification would have been considered obvious in view of the explicit teaching thereof in Loi et al (e.g. Fig. 1) and the recognized suggestion in Loi et al that various resonator structures (e.g. hollow waveguide cavity, dielectric resonator, etc) would have been alternatively realizable, thereby suggesting the obviousness of such a modification.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the preceding rejection as applied to claim 1 above, and further in view of Cameron et al.


The above combination meets the claimed invention except for the probe being a wire loop.

Cameron et al discloses in Fig. 8, wire loops (91, 92) arranged to couple between adjacent resonant cavities through an intervening wall. Moreover, the loop coupling is a recognized alternative to the capacitive or probe coupling (see figs. 7A, 7B).

Accordingly, it would have been obvious in view of the references, taken as a whole, to have alternatively realized the probe coupling of the above combination with a loop coupling as taught by Cameron et al (Fig. 8). Such a modification would have been considered obvious in view of the art recognized equivalents of the loop and probe coupling by Cameron et al, thereby suggesting the obviousness of the modification.

Any inquiry concerning this communication should be directed to Benny T. Lee at telephone number (571)-272-1764.

Lee/ds


Benny T. Lee
Primary Examiner